MEMORANDUM REGARDING A WEEVIL NATIVE TO JAPAN NOW KNOWN TO OCCUR IN THE UNITED STATES

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During 1935 the attention of this Bureau was directed to the fact that a weevil, Calomycterus setarius Roelofs, known to be indigenous to Japan, was spreading in the United States and becoming of increasing importance in some of the localities where its presence has been detected. In order that information regarding the distribution, occurrence, and habits of this insect may be available, the literature has been reviewed and other facts have been summarized. The accompanying statement has been prepared by C. A. Weigel, with the assistance of information assembled by other offices of the Bureau, including the Insect Pest Survey, the Library, and the Division of Insect Identification.

History and Distribution Outside of the United States

This weevil was first described from Japan in 1873 by W. Roelofs (1),* who erected the genus Calomycterus to receive the new species C. setarius.** The weevil is approximately one-sixth of an inch in length and uniformly pearl gray in color. It belongs to the wingless (apterous) group of the Otiorhynchidae. Consequently it is likely that its rate of natural spread is much slower and more limited than is that of the winged forms of insects.

In addition to the publication containing the first description of the weevil, there are only four other foreign references involving this species.

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* Numbers in parantheses denote references cited.

** The literature records only one other species in this genus,--Calomycterus variabilis Kono,--and the only available references on this species are the following:

1930. Kono, H. Kurzrüssler aus dem japanischen Reich. (See reference no. 5. Original description (p. 224) and drawing. Japanese name "Usuiro-menagazo", probably a vernacular name.)

1931. Matsumura, S. Illustrated Insects of Japan-Empire. (Text in Japanese. Figure of adult on p. 279.)

1931. Miwa, Y. A Systematic Catalogue of Formosan Coleoptera. Dept. Agr., Govt. Research Inst., Formosa. 359 pp. (P. 251.)

Judging from these references, all of which are systematic in character, it appears that C. variabilis is known to occur only in Formosa. No references regarding its biology and economic importance appear to be available.

namely by Lewis (2), Schönfeldt (3), Sharp (4), and Kono (5), all of which are systematic in character and do not contain any information regarding the biology or economic phases of the insect. The first two authors mention merely that the insect is present in Japan. Sharp records that it is a remarkable and apparently rare species for which he was not able to record any exact locality. Kono, however, lists the following localities where the insect had been found in Japan: Honshu (Yokohama, Tokio, Sanjodake, and Gifu); Kiushu (Kumamoto). This same author mentions that this species was known by the Japanese name of "Chibi-menagazo", indicating that it may be sufficiently abundant in that country to be given a common name.

History and Distribution in the United States

This weevil was first found in the United States during the summer of 1929 at Yonkers, N. Y., by E. G. Peters. Mr. Peters referred them to his neighbor, W. M. Faunce, of the American Museum of Natural History, at New York City. Mr. Faunce referred these specimens to A. J. Mutchler, of the American Museum of Natural History, who published a note (6) on this occurrence in March, 1930. According to the original account, the weevil adults were causing considerable damage to American and Japanese ivy and were feeding to a lesser extent on rose bushes, geraniums, and woodbine. Later these weevils became so numerous that many thousands of them were attracted to the light-colored paint on the nearby residence of Mr. Faunce, and to any light-colored object located in the vicinity. It is recorded that these weevils were so numerous that trouble was experienced in excluding them from the residence of Mr. Faunce, even with the windows and doors screened. (Specimens determined by L. L. Buchanan.)

W. E. Britton (7) received specimens of the weevil from Lakeville, Conn., on January 8, 1932, with a report that the adults were numerous in a residence. This occurrence was investigated on July 28 by M. P. Zappe, assistant to Dr. Britton, who reported that he found the weevils feeding in moderate numbers on iris, which were growing in a hot, sunny location, in close proximity to the residence in which the specimens had been collected. The iris plants which were shaded by a privet hedge located close to the residence were injured to a greater extent than iris growing at a more remote distance from the residence. The weevils were very numerous on the hatchway leading to the cellar, located at the southwest corner of the residence. Vegetable plants growing nearby had not been injured by the weevil, but an occasional beetle was found on Swiss chard. The food plants referred to by Dr. Britton in this report consist of iris, bindweed (Convolvulus sp.), phlox, and smartweed (Polygonum sp.). (No statement regarding the specific determination of this weevil.)

On July 23, 1935, Britton (8) reported that C. setarius was injuring chrysanthemums and other plants in a greenhouse at Sharon, Conn., located approximately 4 or 5 miles from Lakeville, Conn., the source of the preceding report. (Specimens determined by B. H. Walden of the Connecticut Agricultural Experiment Station.)

T. L. Guyton and A. B. Champlain (9), in June, 1935, reported C. setarius as having been found damaging sweetpotato and yarrow at Mechanicsburg, Pa. They found the beetles to be abundant on yarrow, generally scattered on the flower, and quite plentiful on the sweetpotato plants. (Specimens determined by L. L. Buchanan.)

During July, 1935, E. N. Cory (10) (and H. S. McConnell), of the Maryland Agricultural Experiment Station, reported the presence of the weevil in Maryland on the estate of H. S. Jones, at Towson, Md. The owner stated that this same insect was present on his property in 1934. Literally thousands of beetles invaded two residences in this locality after having fed on a wide variety of plants growing nearby. These food plants consisted of roses, milkweed, red clover, hollyhock, daylily (Hemerocallis), redtop, ivy, Cotoneaster (Pyracantha), and marigold.

Food Plants and Distribution in the United States

Name	State	Reported by
Boston ivy	Maryland	Cory
American ivy	New York	Mutchler
Japanese ivy	New York	Mutchler
Rose	New York, Maryland	Mutchler, Cory
Geranium	New York	Mutchler
Woodbine	New York	Mutchler
Iris	Connecticut	Britton
Phlox	Connecticut	Britton
Bindweed (Convolvulus sp.)	Connecticut	Britton
Smartweed (Polygonum sp.)	Connecticut	Britton
Chrysanthemum (greenhouse)	Connecticut	Britton
Redtop (grass)	Maryland	Cory
Red clover	Maryland	Cory
Marigold	Maryland	Cory
Hollyhock	Maryland	Cory
Daylily (Hemerocallis)	Maryland	Cory
Milkweed	Maryland	Cory
Cotoneaster (Pyracantha)	Maryland	Cory
Sweetpotato	Pennsylvania	Guyton and Champlain
Yarrow	Pennsylvania	Guyton and Champlain

Summary and Conclusion

From the foregoing it is evident that there is very little known concerning the life history, habits, and control of this weevil. The few references available indicate that Japan is the only foreign country in which it occurs. Although it has been given a Japanese name which might indicate that it is a well-known insect in Japan, the records now available do not reveal that it is a serious pest in that country.

Since its first recorded occurrence in New York in 1929 it has spread to Connecticut, Maryland, and Pennsylvania.

The list of food plants includes 13 ornamental and flowering plants, 1 legume, 1 grass, 1 vegetable, and 4 weeds. The present records indicate that it is apparently capable of doing considerable damage to some of the plants that it attacks, viz: American ivy, woodbine, iris, phlox, sweetpotato, yarrow, and greenhouse-grown chrysanthemum. Since some of these are commercial crops, the weevil may become a pest of some concern, especially if it becomes established in some of the important truck-growing regions and nurseries in this country.

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Its habit of swarming around and into dwellings and constituting a nuisance by its presence may also cause it to become obnoxious from that viewpoint, in addition to its possible status as a plant pest.

Although nothing is known concerning its control, advantage may perhaps be taken of its habit of being attracted to light-colored objects in developing traps to catch the adults.

References Cited

(1) 1873. Roelofs, W. Curculionides recueillis au Japan par M. G. Lewis. Ann. Soc. Ent. Belg. 16: 154-192. (Calomycterus setarius, p. 175 and pl. III, fig. 9.)

(2) 1879. Lewis, G. A catalogue of Coleoptera from the Japanese Archipelago, p. 21. London. (Systematic paper; not seen.)

(3) 1887. Schönfeldt, H. v. Catalog der Coleopteren von Japan. Jahrb. Nassauischen Ver. f. Naturkunde 40: 29-204. (C. setarius from Japan listed on p. 143.)

(4) 1896. Sharp, D. The Rhynchophorous Coleoptera of Japan. Part IV. Otiorhynchidae and Sitonides, and a genus of doubtful position from the Kurile Islands. Trans. Ent. Soc. Lond. 1896: 81-115. (C. setarius on p. 84.)

(5) 1930. Kono, H. Kurzrüssler aus dem japanischen Reich. Jour. Faculty Agr., Hokkaido Imp. Univ., Sapporo, Japan, vol. XXIV, pt. 5, pp. 152-242. (C. setarius on p. 224.)

(6) 1930. Mutchler, A. J. A Japanese weevil, Calomycterus setarius Roelofs, which may become a pest in the United States. Amer. Mus. Novitates No. 418, 3 pp. (Adult figured; first record in this country.)

(7) 1933. Britton, W. E. Another Japanese weevil pest C. setarius Roelofs. Conn. Agr. Expt. Sta. Bul. 349, p. 448. (This is also the 32nd Report of the State Entomologist.)

(8) 1935. Britton, W. E. In Insect Pest Survey Bulletin, Bur. Ent. and Plant Quar., U.S. Dept. Agr., vol. 15, no. 6, p. 315. (Mimeographed.)

(9) 1935. Guyton, T. L., and Champlain, A. B. In Insect Pest Survey Bulletin, vol. 15, no. 5, p. 251.

(10) 1935. Cory, E. N. In Insect Pest Survey Bulletin, vol. 15, no. 6, p. 315.